

DETAILED ACTION

1. This Office Action is responsive to the amendment filed 7/11/2011. Claims 1, 5, 7, 11, and 19 are amended. Claims 20-21 are new. **Claims 1-8 and 11-21** remain pending and under prosecution.

Claim Objections

2. Claim 21 is objected to because of the following informalities: "the dermis" lacks proper antecedent basis.
3. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. **Claims 1-8 and 11-21** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, it is unclear what is meant by the term skin. For example, Claims 1 and 11 recite that the probe is placed "on the skin" and the electric field penetrates "past the skin to the subcutaneous fat tissue underneath." This implies that the recited skin refers to the superficial layer of the skin only. However, Claim 5 recites that "the edema of upper layers of the skin is measured... electric field is concentrated in the upper layers of the skin." However, applicant's specification has explicitly disclosed that measurement of edema is not possible if the electric field is concentrated on the superficial layers of the skin (p.3 line 15-

16). It is noted that the specification also does not explicitly set forth what constitutes said superficial layers of skin. Thus in light of Claim 1, Claim 5 would be interpreted as the electric field is concentrated on the superficial layers of the skin to measure edema, but this has been deemed impossible by applicant's disclosure. Therefore, it is unclear which component of skin is meant by each recitation of the term skin in the claims, because in some instances it appears that "skin" is used to designate a superficial layer, and in other instances it appears "skin" is used to designate all or multiple layers of the skin, or even tissue (see below). This applies to *all claims* in which the term skin has been recited. Applicant is requested to clearly specify in EACH claim the type of action that is involved with the skin, and to show adequate support for said limitations from applicant's disclosure.

6. Regarding Claims 5-6 and 18, it is also unclear what is meant by the recitation that the "edema of the upper layers" and the "edema of the deep skin layers" is measured, because Claim 1 introduces in the preamble the device for measuring edema in *tissue*, which as best understood by the examiner and reasonably presented in the art, does not include *skin*. Edema is typically understood to be a condition of the tissue, and as abundantly argued by applicant in past remarks, is differentiated by the art teaching probes to measure skin water content, i.e. not tissue edema. However, said claims clearly recite the edema occurring in the *skin*, which appears to contradict known literature, for example see <http://en.wikipedia.org/wiki/Edema> -- edema occurs beneath skin. Furthermore, the term "dermis" has been introduced in Claims 16, 19, and 21, which also adds to the confusion. One of ordinary skill in the art would know that the dermis is a portion of the skin (see <http://en.wikipedia.org/wiki/Skin>), yet one of ordinary skill in the art would also know that edema cannot occur in skin. Applicant's disclosure also appears to be ambiguous

towards the categorization of said dermis as either part of skin or tissue, for example p.4 line 7 states that the “electric field penetrates deeply into the skin tissue (dermis).” Thus, it appears that applicant has attempted to define said dermis as constituting *both* tissue and skin, implying that the terms tissue and skin are interchangeable, which is a cause of indefiniteness in said claims, especially because this has been the crux of arguments regarding applied prior art. As an auxiliary matter, it is also noted that it is unclear if the subcutaneous fat tissue is also considered a layer of the skin or a separate structure.

7. Therefore, it is submitted that there are many instances of vague and unclear terminology in the claims, especially regarding the use of the terms "skin, tissue, and edema." Applicant is respectfully requested to clearly explain exactly what is meant and defined by each term, and to explain the invention and EACH claim in a likewise manner. It is noted that applicant's disclosure does not clarify any of the above issues because no further details have been presented in more clarifying language. Applicant is also reminded that any amendments to the claims must be accompanied by adequate support in the disclosure.

Allowable Subject Matter

8. **Claims 1-8 and 11-21** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and claim objections, set forth in this Office action.

9. As noted in the §112 rejection above, there is question as to whether the invention is meant to only measure edema in tissue and not within the skin. Pending applicant's response, the now vacated art rejections may be again called upon to reject the claims if it is not

sufficiently elaborated upon that the invention does not only measure edema within tissue vs. skin.

Response to Arguments

10. Applicant's arguments with respect to the §112 rejections have been considered but are moot in view of the new §112 rejections above.
11. The rejection for Claim 11 has been withdrawn in light of applicant's amendments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN NGUYEN whose telephone number is (571)272-8340. The examiner can normally be reached on Monday - Friday, 9 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. N./
Examiner, Art Unit 3736

/Max Hindenburg/
Supervisory Patent Examiner, Art Unit 3736